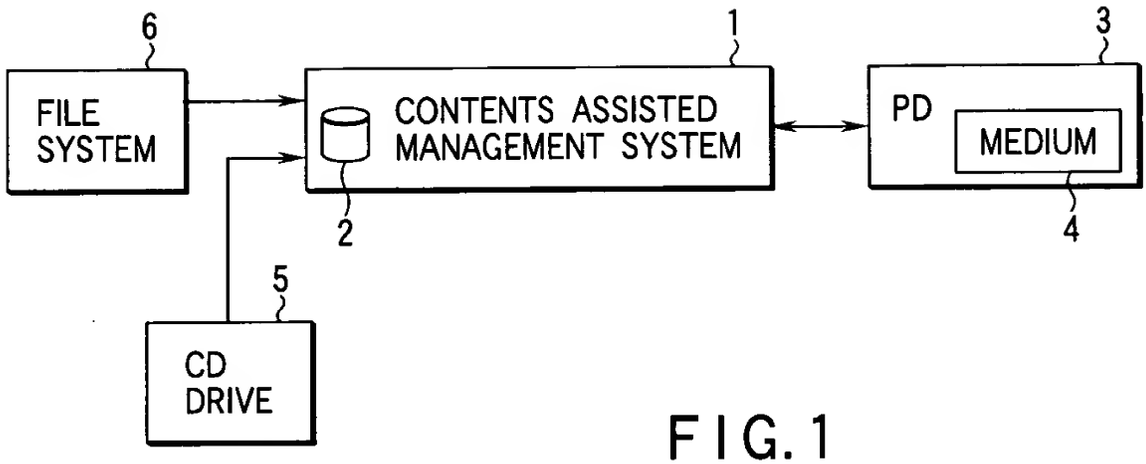
6
FILE SYSTEM
1
CONTENTS ASSISTED MANAGEMENT SYSTEM
2
3
PD
MEDIUM
4
5
CD DRIVE

FIG. 1

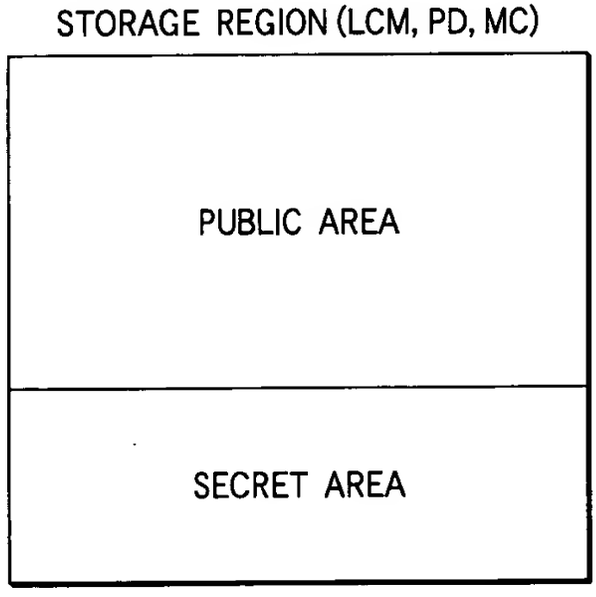
STORAGE REGION (LCM, PD, MC)
PUBLIC AREA
SECRET AREA

FIG. 3

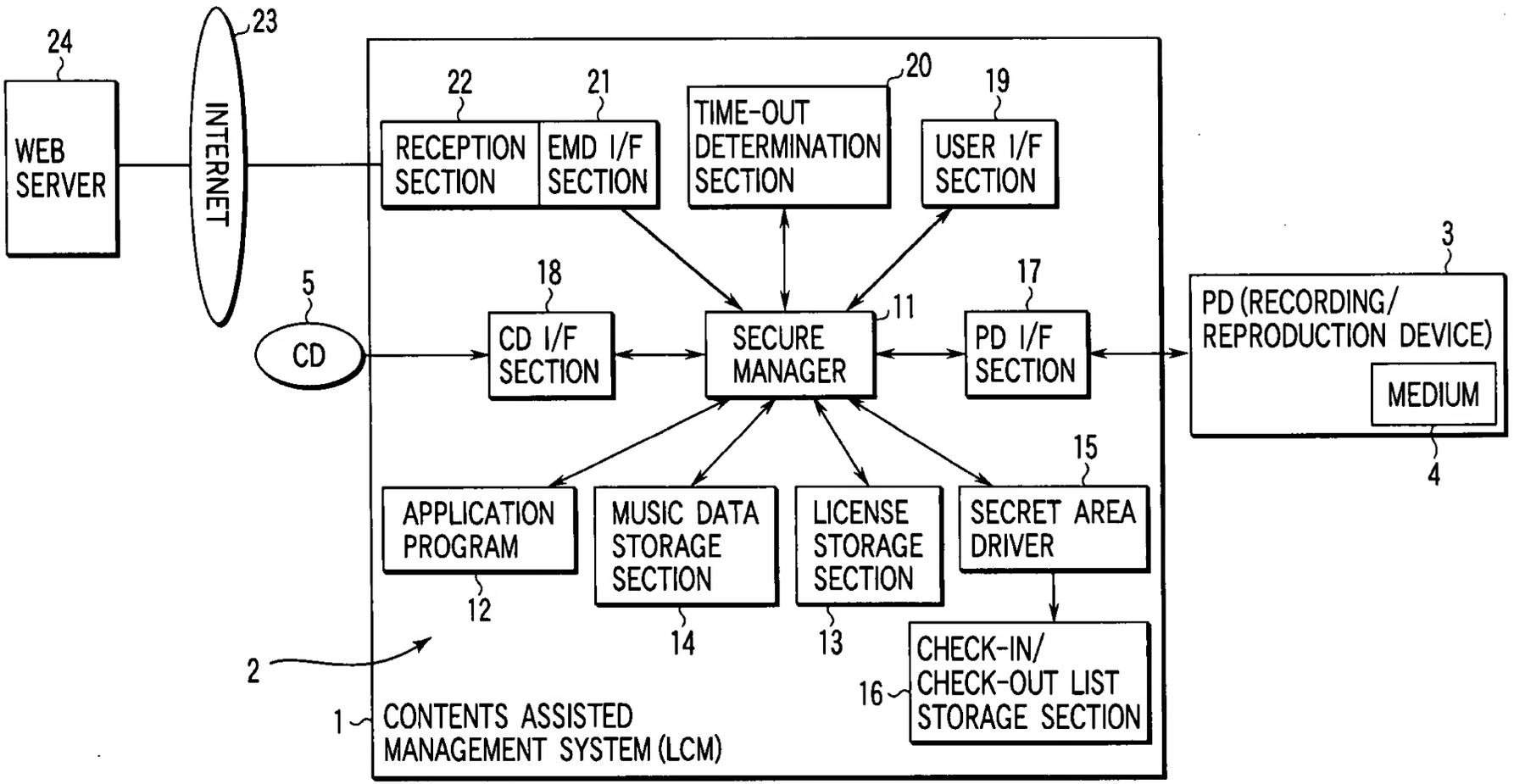
24
WEB SERVER
23
INTERNET
22
RECEPTION SECTION
21
EMD I/F SECTION
20
TIME-OUT DETERMINATION SECTION
19
USER I/F SECTION
3
PD (RECORDING/ REPRODUCTION DEVICE)
MEDIUM
4
5
CD
18
CD I/F SECTION
11
SECURE MANAGER
17
PD I/F SECTION
15
APPLICATION PROGRAM
12
MUSIC DATA STORAGE SECTION
14
LICENSE STORAGE SECTION
13
SECRET AREA DRIVER
CHECK-IN/ CHECK-OUT LIST STORAGE SECTION
16
2
1
CONTENTS ASSISTED MANAGEMENT SYSTEM (LCM)

FIG. 2

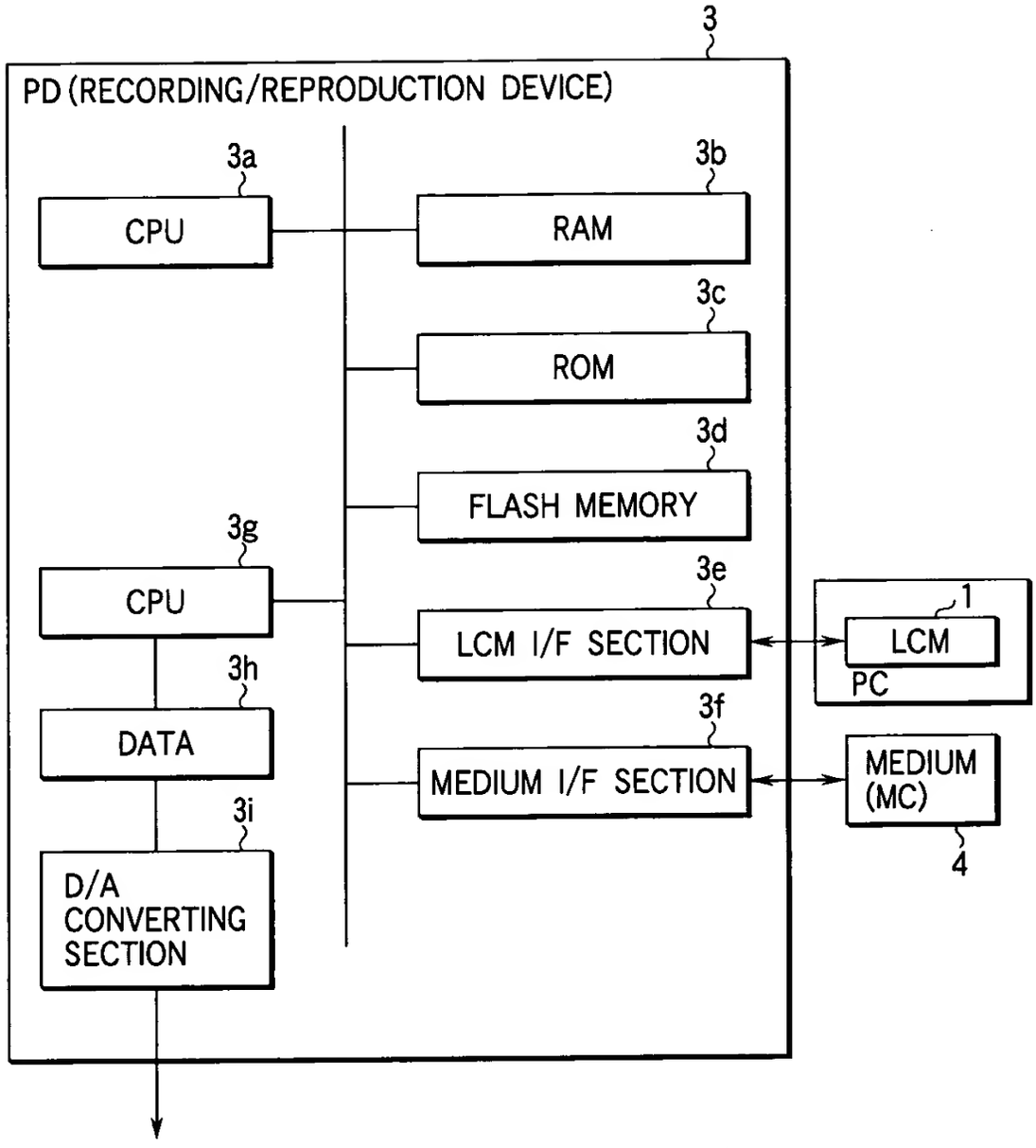
3
PD (RECORDING/REPRODUCTION DEVICE)
3a
CPU
3b
RAM
3c
ROM
3d
FLASH MEMORY
3g
CPU
3e
LCM I/F SECTION
1
LCM
PC
3h
DATA
3f
MEDIUM I/F SECTION
MEDIUM (MC)
4
3i
D/A CONVERTING SECTION

FIG. 4

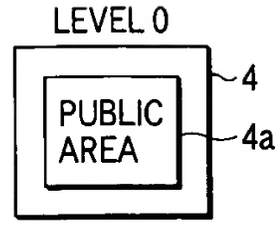

FIG. 5A

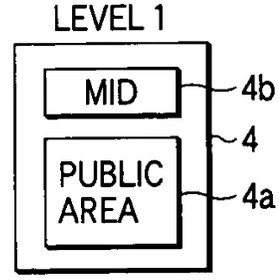

FIG. 5B

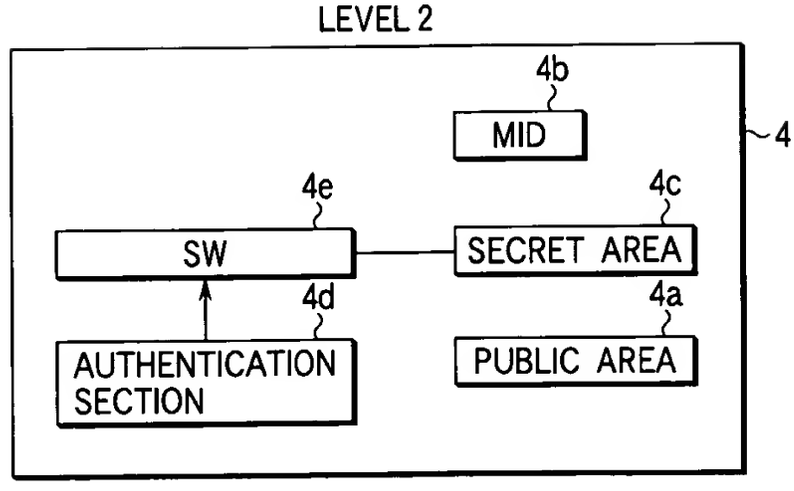

FIG. 5C

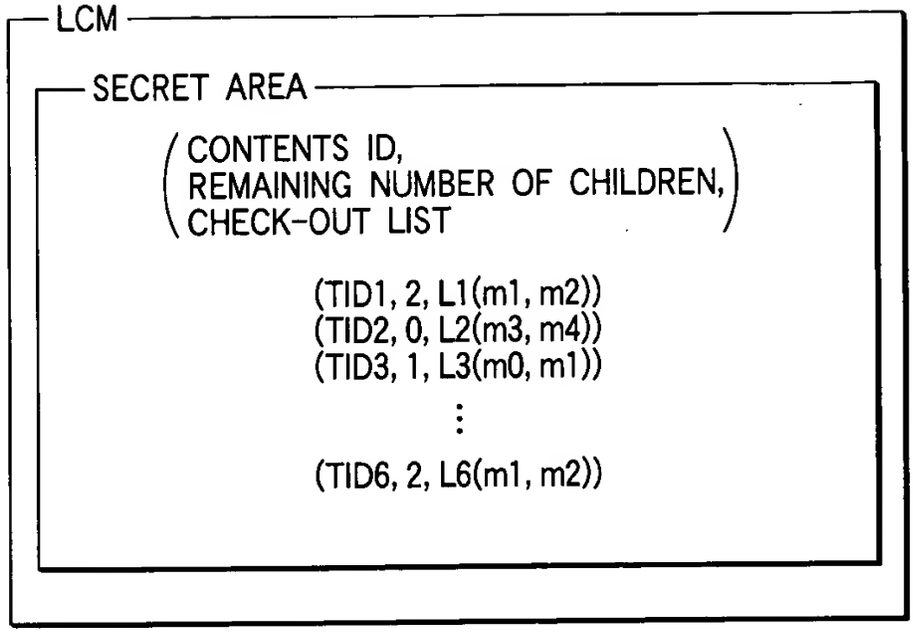

FIG. 6A

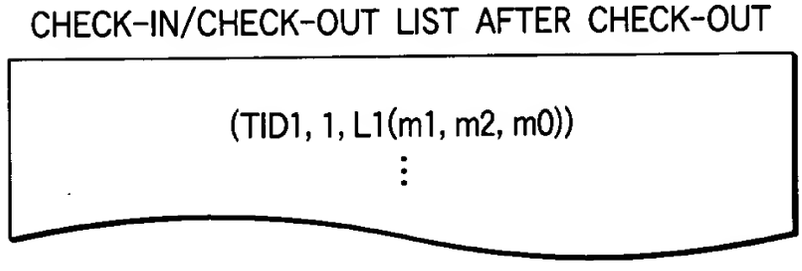

FIG. 6B

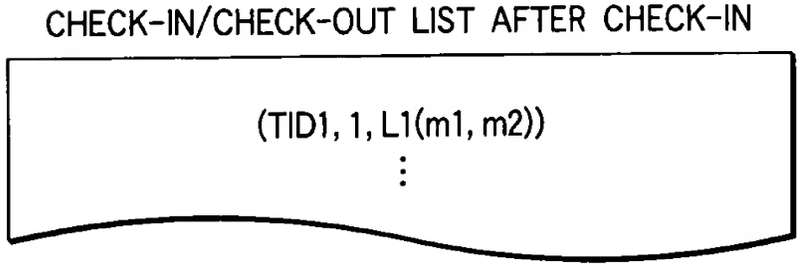

FIG. 6C

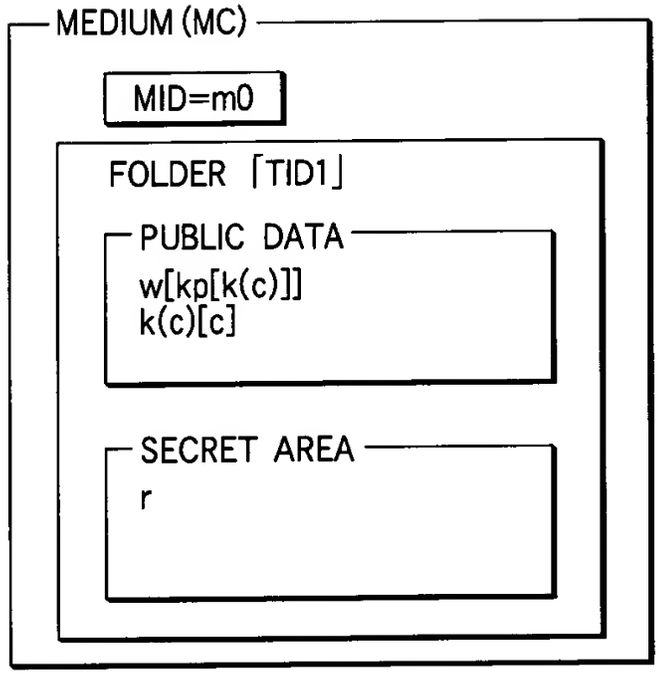
MEDIUM (MC)
MID=m0
FOLDER 「TID1」
PUBLIC DATA
w[kp[k(c)]]
k(c)[c]
SECRET AREA
r

FIG. 7

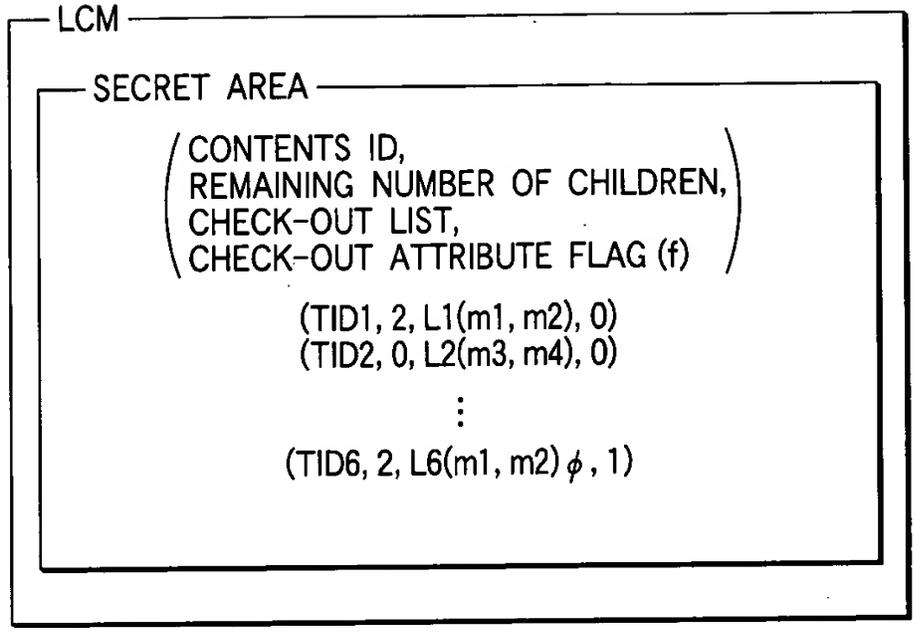

FIG. 8A

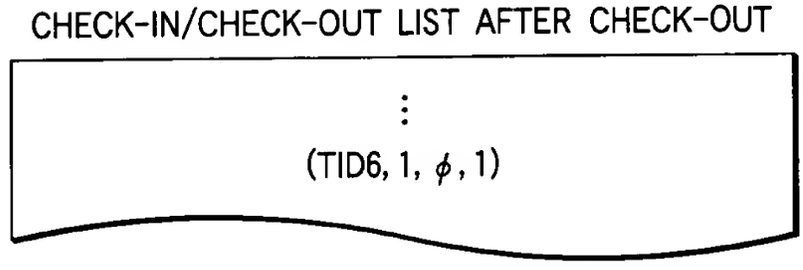

FIG. 8B

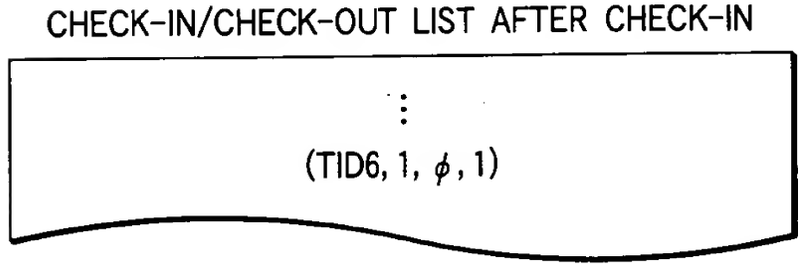

FIG. 8C

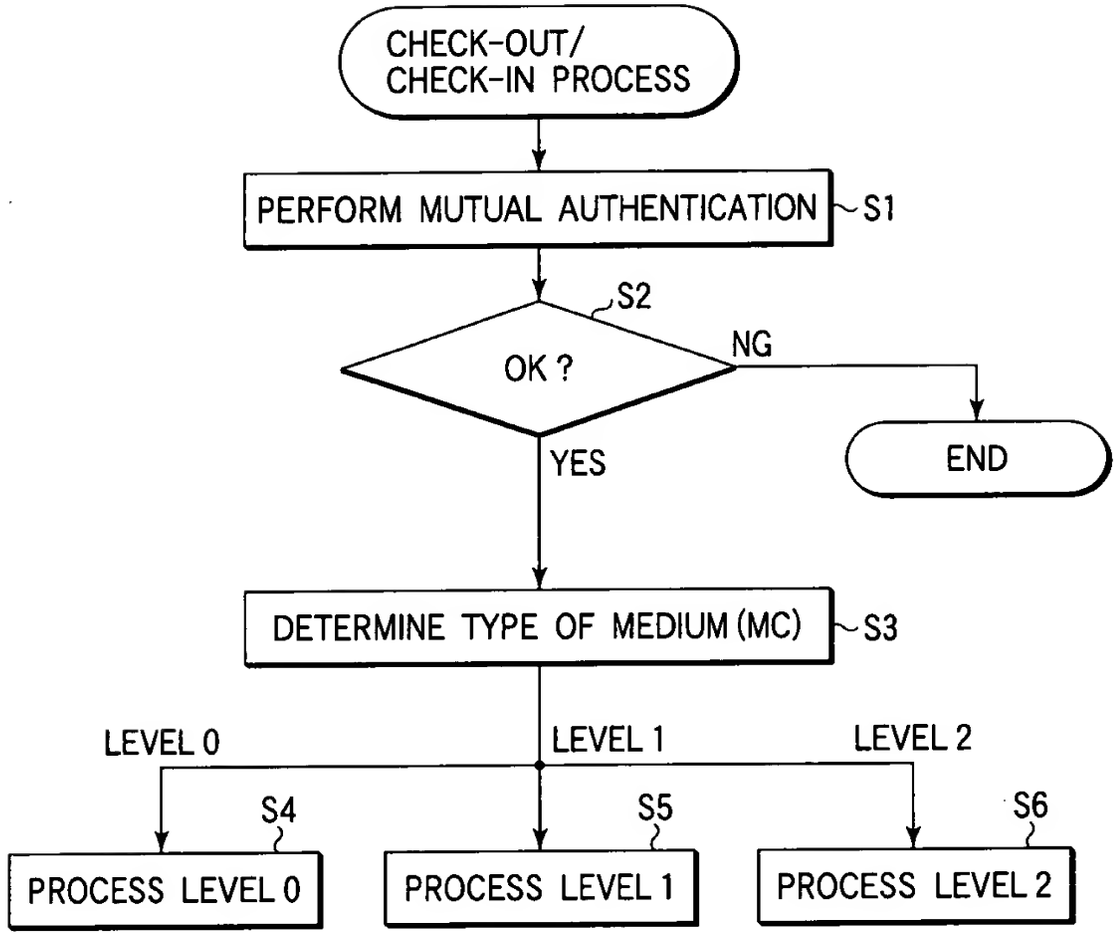
CHECK-OUT/
CHECK-IN PROCESS
PERFORM MUTUAL AUTHENTICATION
S1
S2
OK ?
NG
END
YES
DETERMINE TYPE OF MEDIUM (MC)
S3
LEVEL 0
LEVEL 1
LEVEL 2
S4
S5
S6
PROCESS LEVEL 0
PROCESS LEVEL 1
PROCESS LEVEL 2

FIG. 9

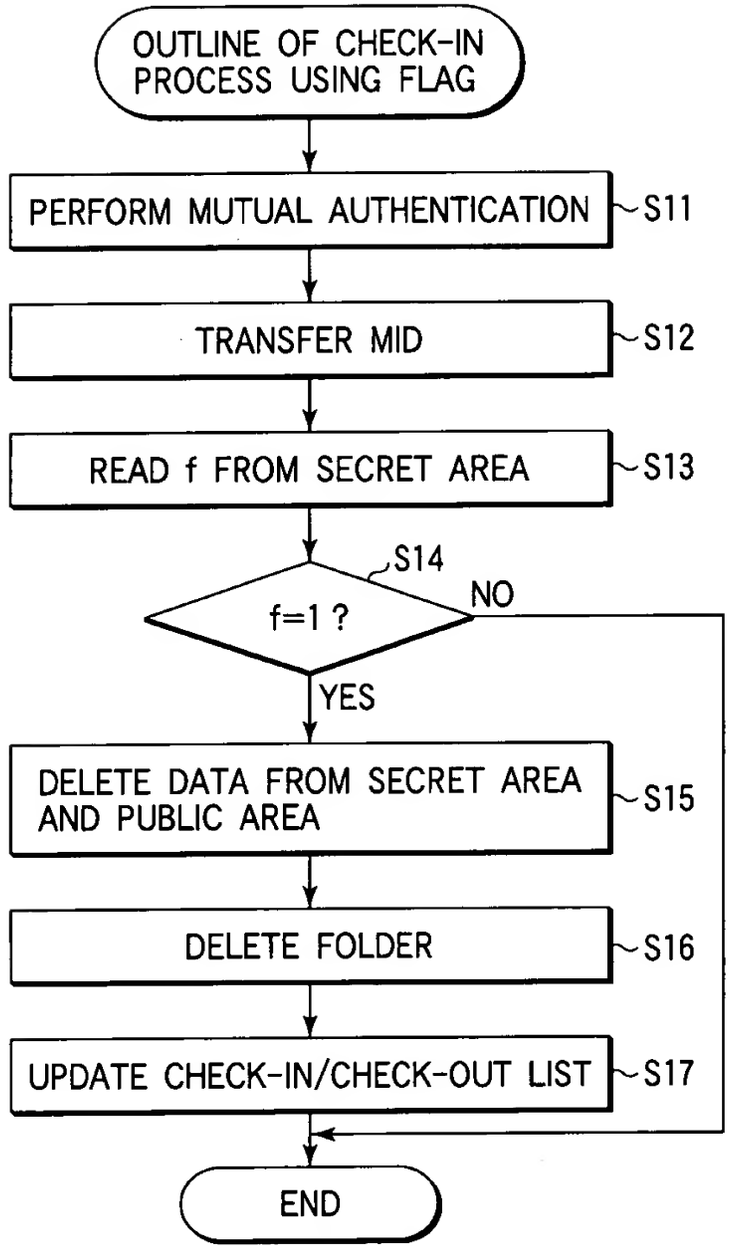
OUTLINE OF CHECK-IN PROCESS USING FLAG
PERFORM MUTUAL AUTHENTICATION
S11
TRANSFER MID
S12
READ f FROM SECRET AREA
S13
S14
f=1 ?
NO
YES
DELETE DATA FROM SECRET AREA AND PUBLIC AREA
S15
DELETE FOLDER
S16
UPDATE CHECK-IN/CHECK-OUT LIST
S17
END

FIG. 10

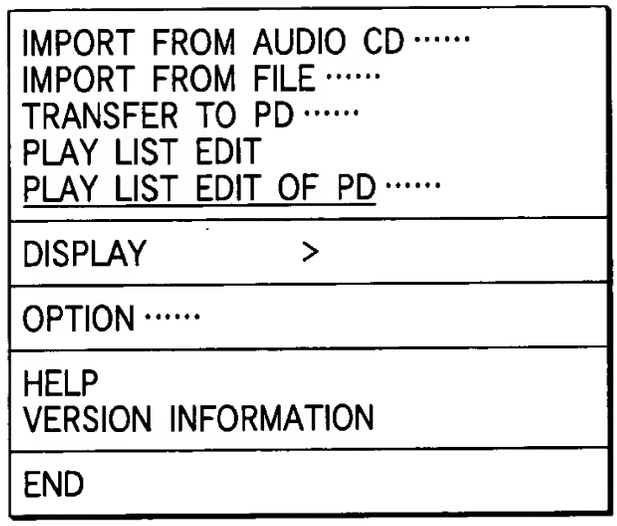

FIG. 11A

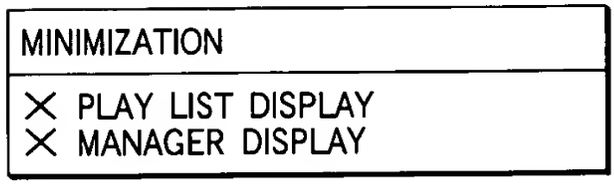

FIG. 11B

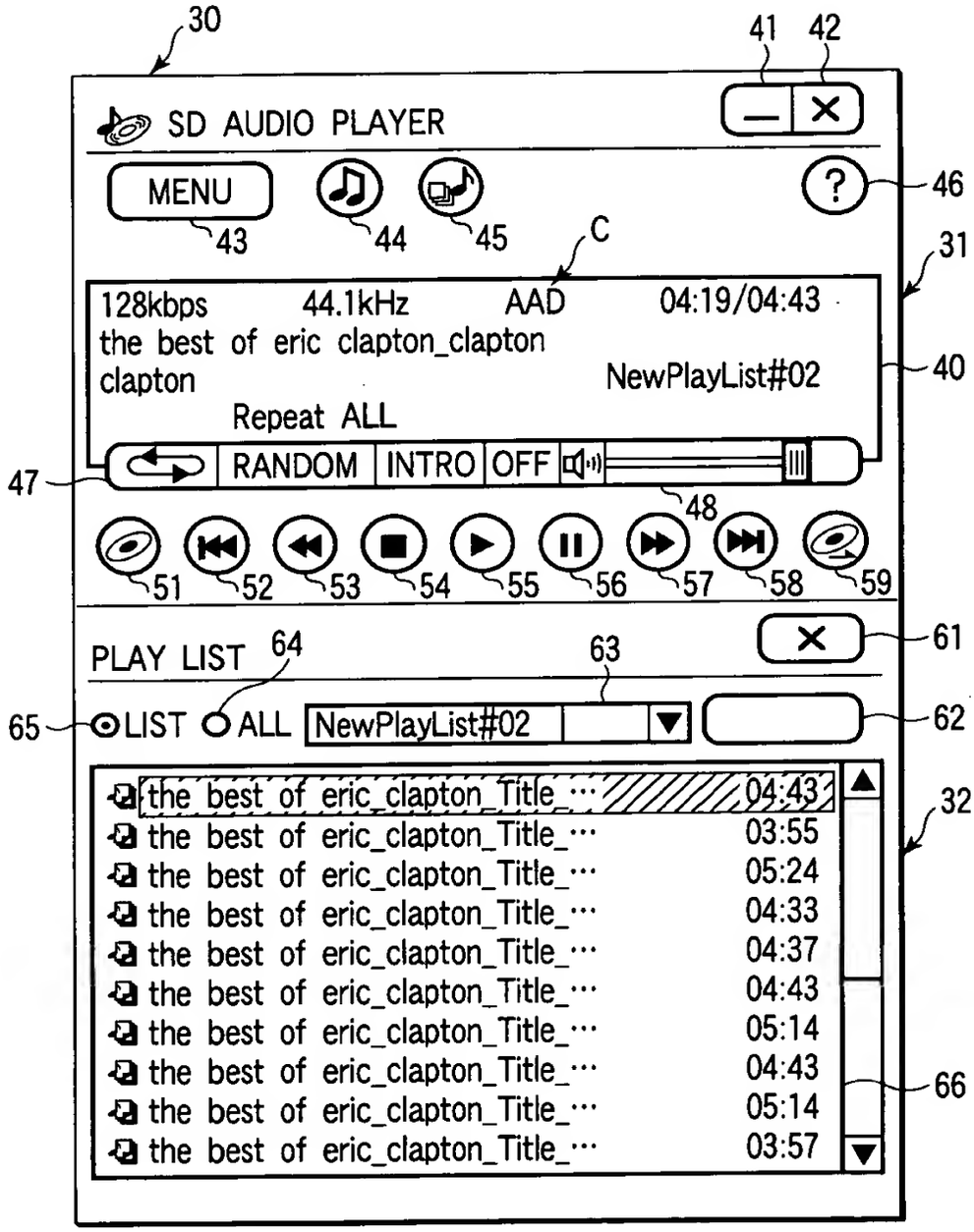
30
41
42
SD AUDIO PLAYER
MENU
43
44
45
C
46
31
128kbps
44.1kHz
AAD
04:19/04:43
the best of eric clapton_clapton
clapton
NewPlayList#02
40
Repeat ALL
47
RANDOM
INTRO
OFF
48
51
52
53
54
55
56
57
58
59
PLAY LIST
64
63
61
65
LIST
ALL
NewPlayList#02
62
the best of eric_clapton_Title_··· 04:43
the best of eric_clapton_Title_··· 03:55
the best of eric_clapton_Title_··· 05:24
the best of eric_clapton_Title_··· 04:33
the best of eric_clapton_Title_··· 04:37
the best of eric_clapton_Title_··· 04:43
the best of eric_clapton_Title_··· 05:14
the best of eric_clapton_Title_··· 04:43
the best of eric_clapton_Title_··· 05:14
the best of eric_clapton_Title_··· 03:57
32
66

FIG. 12

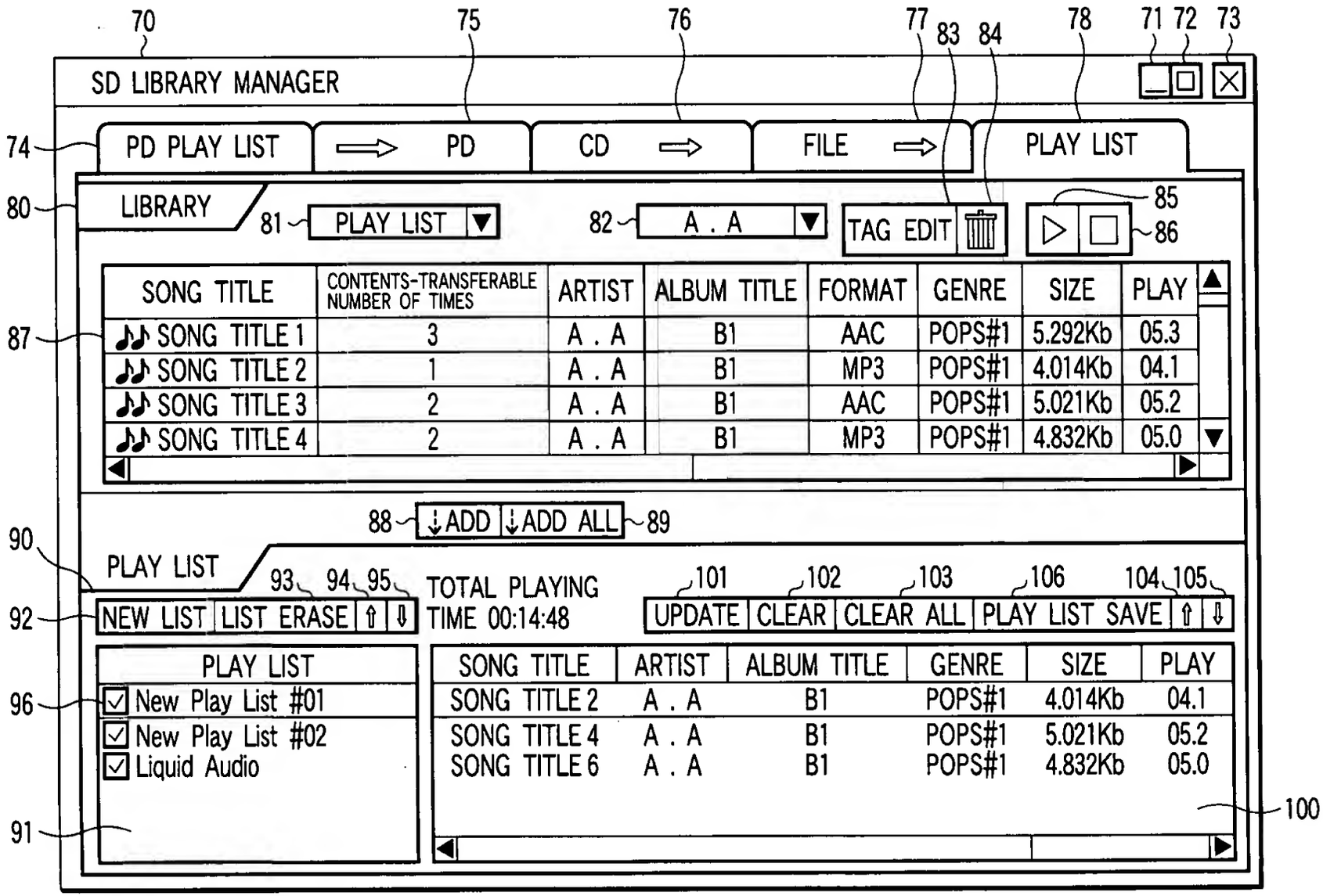
70
75
76
77
83
84
78
71
72
73
SD LIBRARY MANAGER
74
PD PLAY LIST
PD
CD
FILE
PLAY LIST
80
LIBRARY
81
PLAY LIST
82
A . A
TAG EDIT
85
86
SONG TITLE
CONTENTS-TRANSFERABLE NUMBER OF TIMES
ARTIST
ALBUM TITLE
FORMAT
GENRE
SIZE
PLAY
87
SONG TITLE 1 3 A . A B1 AAC POPS#1 5.292Kb 05.3
SONG TITLE 2 1 A . A B1 MP3 POPS#1 4.014Kb 04.1
SONG TITLE 3 2 A . A B1 AAC POPS#1 5.021Kb 05.2
SONG TITLE 4 2 A . A B1 MP3 POPS#1 4.832Kb 05.0
88
ADD
ADD ALL
89
90
PLAY LIST
93
94
95
TOTAL PLAYING TIME 00:14:48
101
102
103
106
104
105
92
NEW LIST
LIST ERASE
UPDATE
CLEAR
CLEAR ALL
PLAY LIST SAVE
PLAY LIST
96
New Play List #01
New Play List #02
Liquid Audio
SONG TITLE
ARTIST
ALBUM TITLE
GENRE
SIZE
PLAY
SONG TITLE 2 A . A B1 POPS#1 4.014Kb 04.1
SONG TITLE 4 A . A B1 POPS#1 5.021Kb 05.2
SONG TITLE 6 A . A B1 POPS#1 4.832Kb 05.0
91
100

FIG. 13

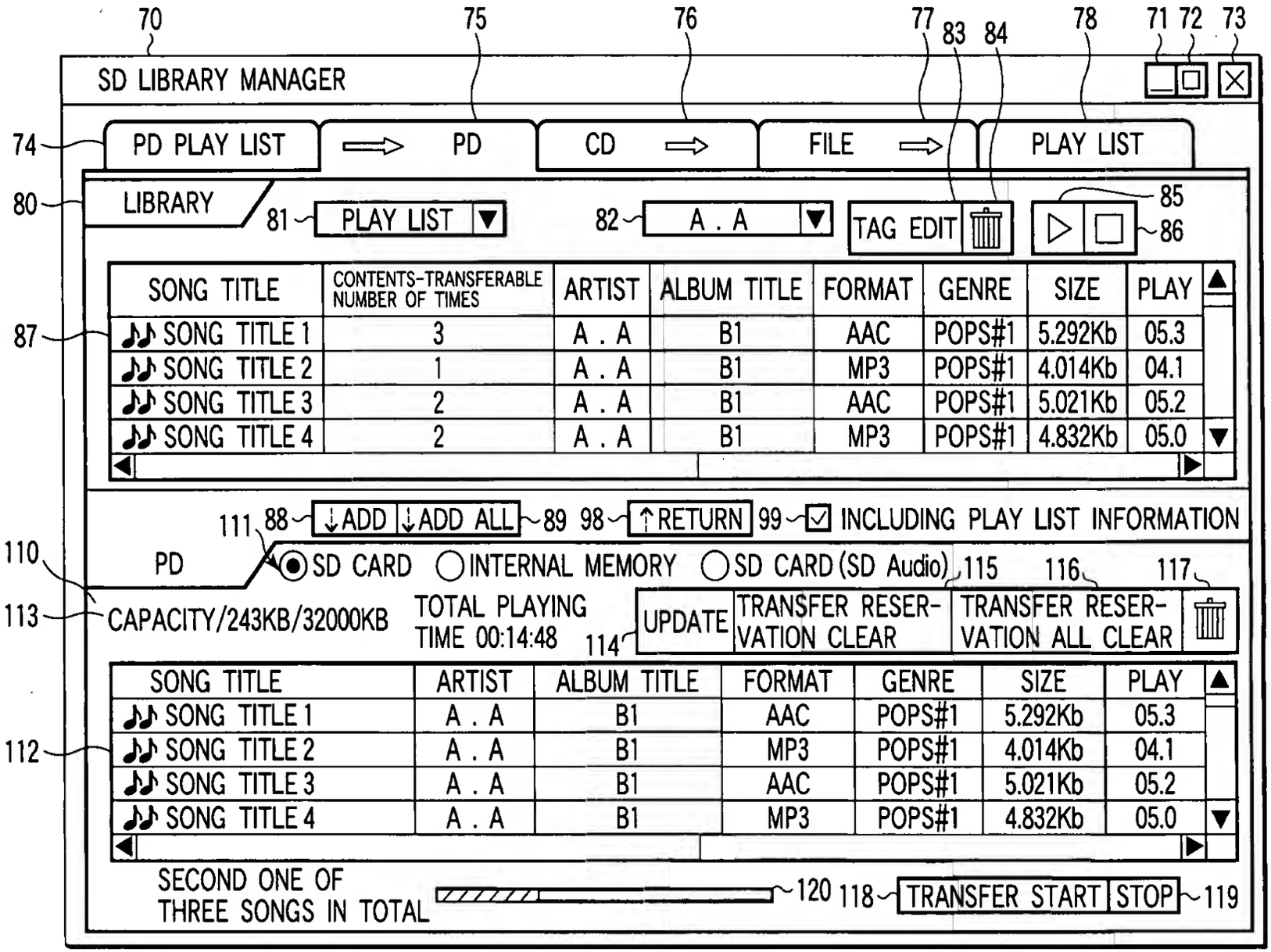
70
75
76
77
83
84
78
71
72
73
SD LIBRARY MANAGER
74
PD PLAY LIST
PD
CD
FILE
PLAY LIST
80
LIBRARY
81
PLAY LIST
82
A . A
TAG EDIT
85
86
SONG TITLE
CONTENTS-TRANSFERABLE NUMBER OF TIMES
ARTIST
ALBUM TITLE
FORMAT
GENRE
SIZE
PLAY
87
SONG TITLE 1 3 A . A B1 AAC POPS#1 5.292Kb 05.3
SONG TITLE 2 1 A . A B1 MP3 POPS#1 4.014Kb 04.1
SONG TITLE 3 2 A . A B1 AAC POPS#1 5.021Kb 05.2
SONG TITLE 4 2 A . A B1 MP3 POPS#1 4.832Kb 05.0
111
88
↓ADD
↓ADD ALL
89
98
↑RETURN
99
INCLUDING PLAY LIST INFORMATION
110
PD
SD CARD
INTERNAL MEMORY
SD CARD (SD Audio)
115
116
117
113
CAPACITY/243KB/32000KB
TOTAL PLAYING TIME 00:14:48
114
UPDATE
TRANSFER RESERVATION CLEAR
TRANSFER RESERVATION ALL CLEAR
SONG TITLE
ARTIST
ALBUM TITLE
FORMAT
GENRE
SIZE
PLAY
112
SONG TITLE 1 A . A B1 AAC POPS#1 5.292Kb 05.3
SONG TITLE 2 A . A B1 MP3 POPS#1 4.014Kb 04.1
SONG TITLE 3 A . A B1 AAC POPS#1 5.021Kb 05.2
SONG TITLE 4 A . A B1 MP3 POPS#1 4.832Kb 05.0
SECOND ONE OF THREE SONGS IN TOTAL
120
118
TRANSFER START
STOP
119

FIG. 14

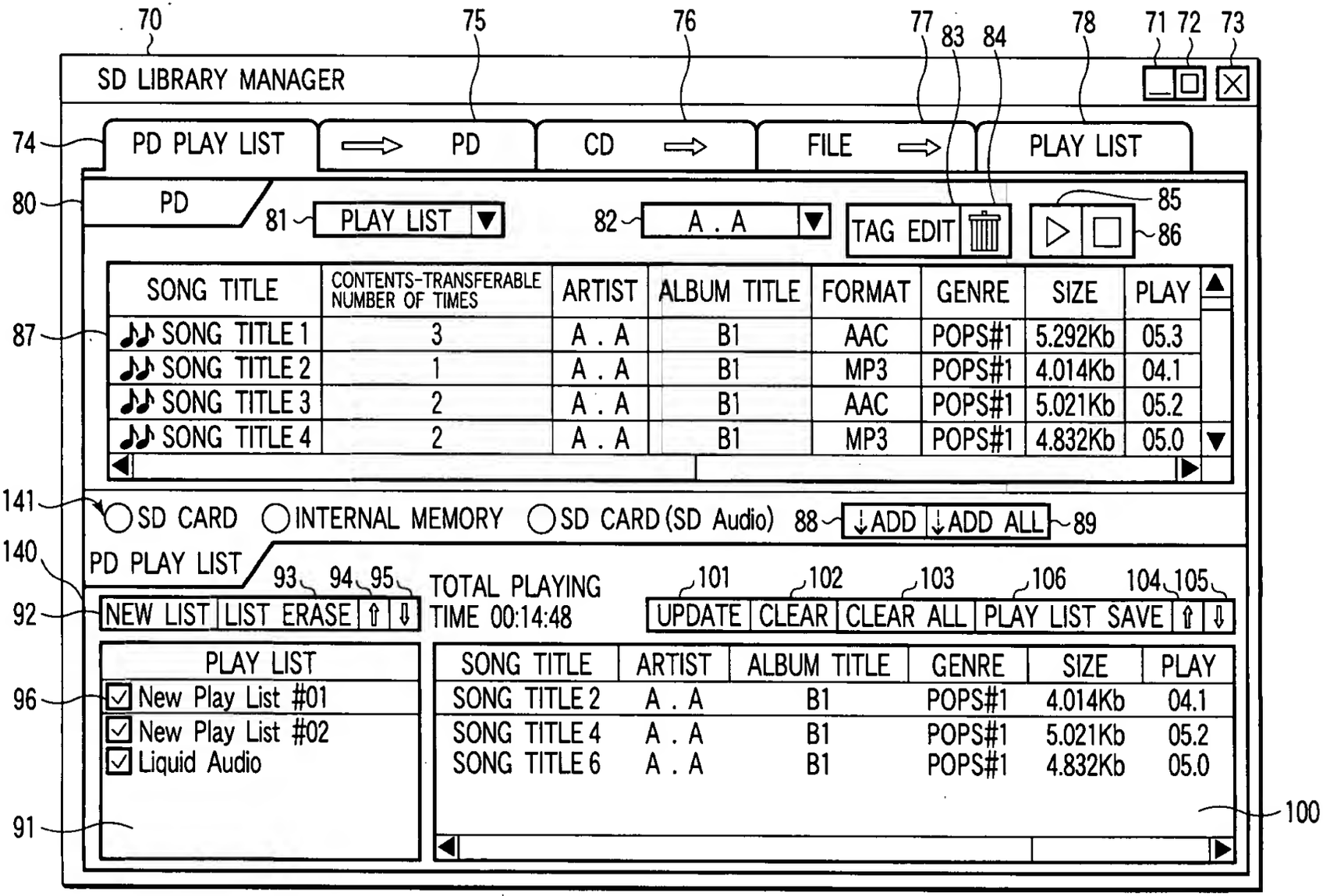
70
75
76
77
83
84
78
71
72
73
SD LIBRARY MANAGER
74
PD PLAY LIST
PD
CD
FILE
PLAY LIST
80
PD
81
PLAY LIST
82
A . A
TAG EDIT
85
86
SONG TITLE
CONTENTS-TRANSFERABLE NUMBER OF TIMES
ARTIST
ALBUM TITLE
FORMAT
GENRE
SIZE
PLAY
87
SONG TITLE 1 3 A . A B1 AAC POPS#1 5.292Kb 05.3
SONG TITLE 2 1 A . A B1 MP3 POPS#1 4.014Kb 04.1
SONG TITLE 3 2 A . A B1 AAC POPS#1 5.021Kb 05.2
SONG TITLE 4 2 A . A B1 MP3 POPS#1 4.832Kb 05.0
141
SD CARD
INTERNAL MEMORY
SD CARD (SD Audio)
88
ADD
ADD ALL
89
140
PD PLAY LIST
93
94
95
92
NEW LIST
LIST ERASE
TOTAL PLAYING TIME 00:14:48
101
102
103
106
104
105
UPDATE
CLEAR
CLEAR ALL
PLAY LIST SAVE
PLAY LIST
96
New Play List #01
New Play List #02
Liquid Audio
SONG TITLE ARTIST ALBUM TITLE GENRE SIZE PLAY
SONG TITLE 2 A . A B1 POPS#1 4.014Kb 04.1
SONG TITLE 4 A . A B1 POPS#1 5.021Kb 05.2
SONG TITLE 6 A . A B1 POPS#1 4.832Kb 05.0
91
100

FIG. 15

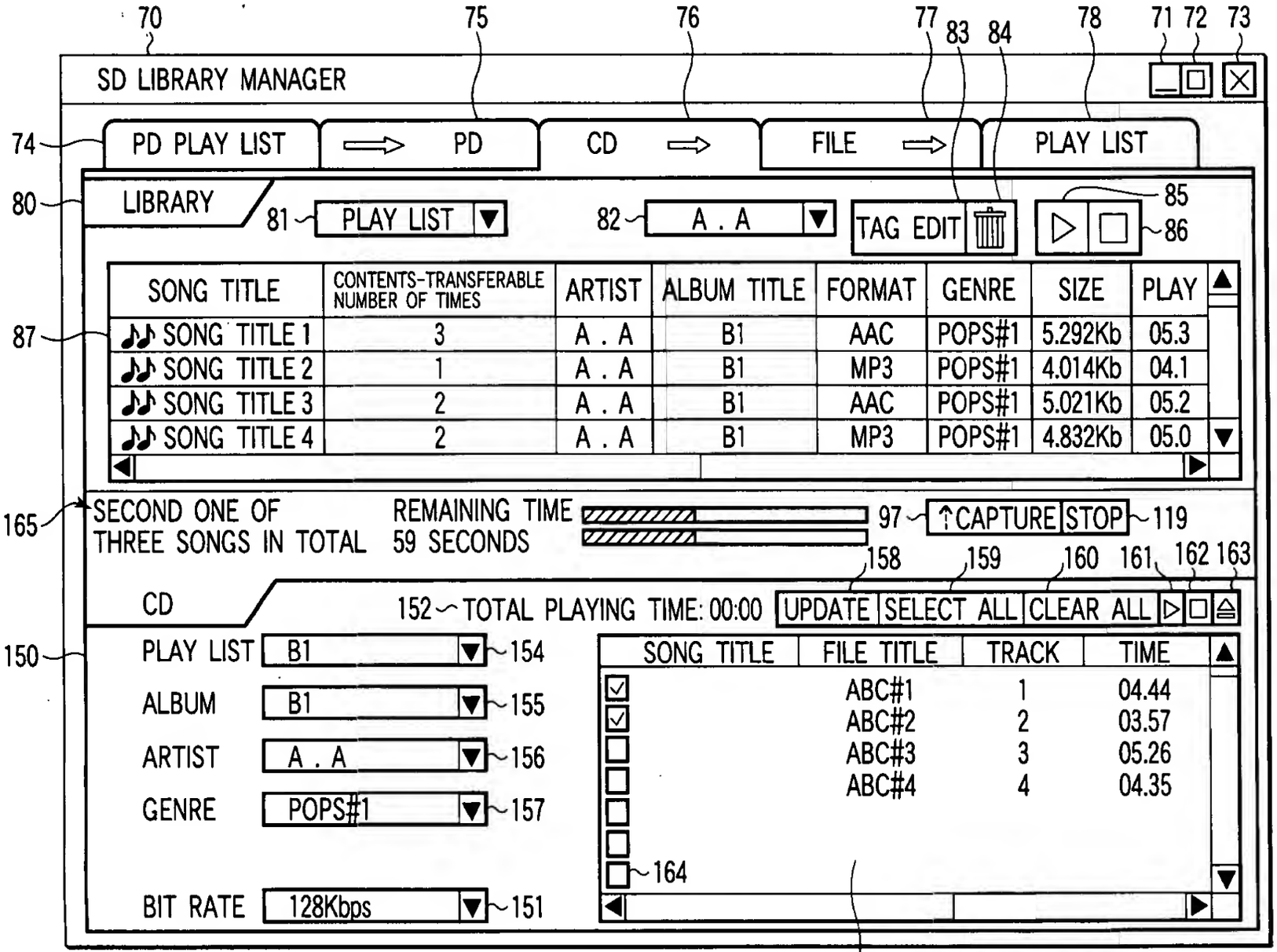
70
75
76
77
83
84
78
71
72
73
SD LIBRARY MANAGER
74
PD PLAY LIST
PD
CD
FILE
PLAY LIST
80
LIBRARY
81
PLAY LIST
82
A . A
TAG EDIT
85
86
SONG TITLE
CONTENTS-TRANSFERABLE NUMBER OF TIMES
ARTIST
ALBUM TITLE
FORMAT
GENRE
SIZE
PLAY
87
SONG TITLE 1 3 A . A B1 AAC POPS#1 5.292Kb 05.3
SONG TITLE 2 1 A . A B1 MP3 POPS#1 4.014Kb 04.1
SONG TITLE 3 2 A . A B1 AAC POPS#1 5.021Kb 05.2
SONG TITLE 4 2 A . A B1 MP3 POPS#1 4.832Kb 05.0
165
SECOND ONE OF THREE SONGS IN TOTAL
REMAINING TIME 59 SECONDS
97
CAPTURE
STOP
119
158
159
160
161
162
163
CD
152
TOTAL PLAYING TIME: 00:00
UPDATE
SELECT ALL
CLEAR ALL
150
PLAY LIST
B1
154
ALBUM
B1
155
ARTIST
A . A
156
GENRE
POPS#1
157
BIT RATE
128Kbps
151
SONG TITLE
FILE TITLE
TRACK
TIME
ABC#1 1 04.44
ABC#2 2 03.57
ABC#3 3 05.26
ABC#4 4 04.35
164
153

FIG. 16

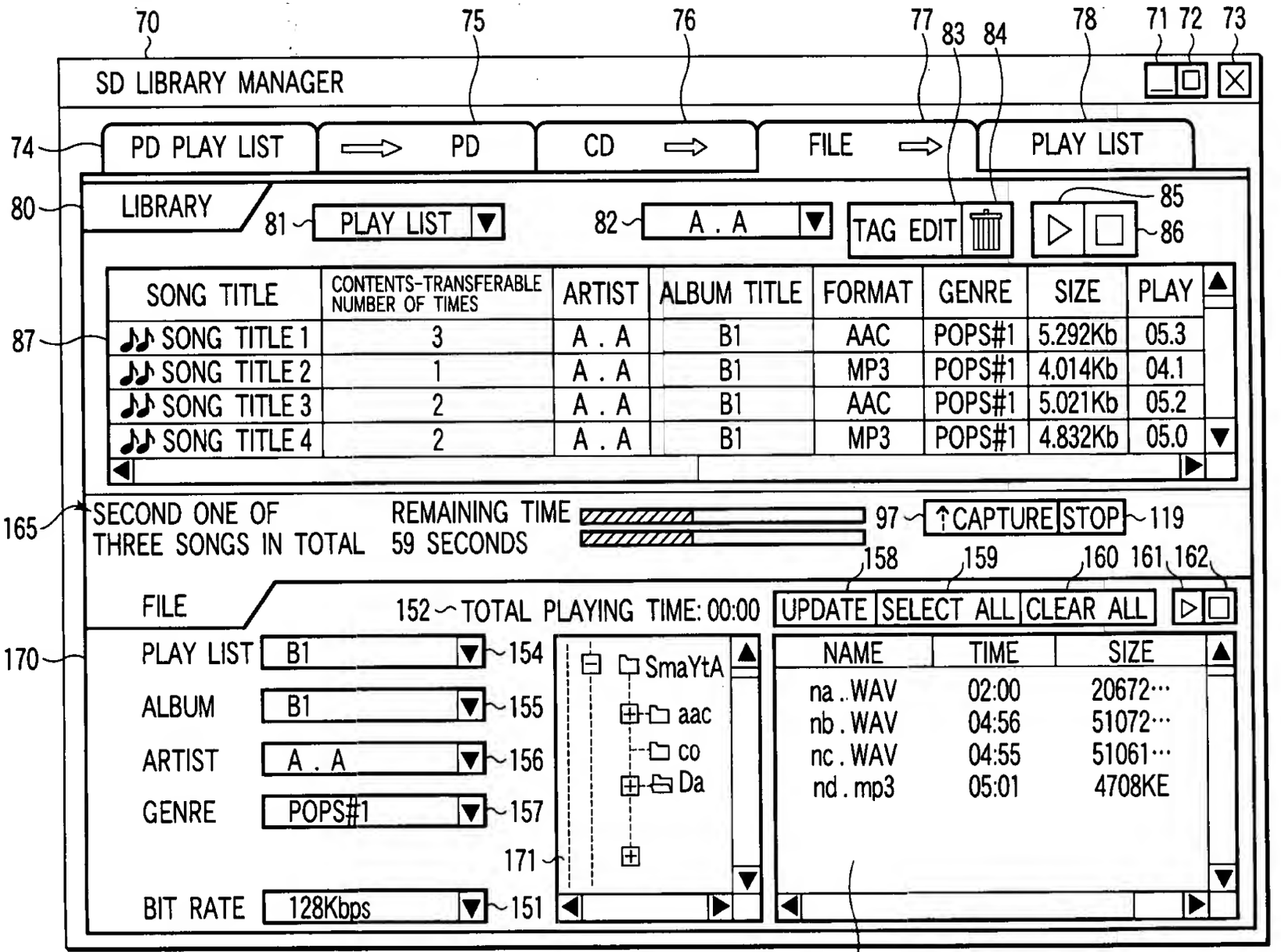
70
75
76
77
83
84
78
71
72
73
SD LIBRARY MANAGER
74
PD PLAY LIST
PD
CD
FILE
PLAY LIST
80
LIBRARY
81
PLAY LIST
82
A . A
TAG EDIT
85
86
SONG TITLE
CONTENTS-TRANSFERABLE NUMBER OF TIMES
ARTIST
ALBUM TITLE
FORMAT
GENRE
SIZE
PLAY
87
SONG TITLE 1 3 A . A B1 AAC POPS#1 5.292Kb 05.3
SONG TITLE 2 1 A . A B1 MP3 POPS#1 4.014Kb 04.1
SONG TITLE 3 2 A . A B1 AAC POPS#1 5.021Kb 05.2
SONG TITLE 4 2 A . A B1 MP3 POPS#1 4.832Kb 05.0
165
SECOND ONE OF THREE SONGS IN TOTAL
REMAINING TIME 59 SECONDS
97
CAPTURE
STOP
119
158
159
160
161
162
FILE
152
TOTAL PLAYING TIME: 00:00
UPDATE
SELECT ALL
CLEAR ALL
170
PLAY LIST
B1
154
ALBUM
B1
155
ARTIST
A . A
156
GENRE
POPS#1
157
171
BIT RATE
128Kbps
151
SmaYtA
aac
co
Da
NAME
TIME
SIZE
na . WAV 02:00 20672…
nb . WAV 04:56 51072…
nc . WAV 04:55 51061…
nd . mp3 05:01 4708KE
172

FIG. 17